Use Attainability Analysis for WBID 1337 Little Clear Creek Submitted by SES, Inc.

To

Missouri Department of Natural Resources Water Protection Program Date Received: June 4, 2007

#### Field Data Sheets for Recreation Use Stream Surveys Data Sheet A - Water Body Identification

(For water body being surveyed)

### **Water Body Information**

Water Body Name: Little Clear	Creek	WBID:	1337
8 digit HUC code: 10290105		County:	Vernon
Upstream Legal Description	34N 30W 8		
Downstream Legal Description	34N 30W 9		
Number of Sites Evaluated	3		
List all site numbers, listed upstrea	nm to downstream	1,2,3	

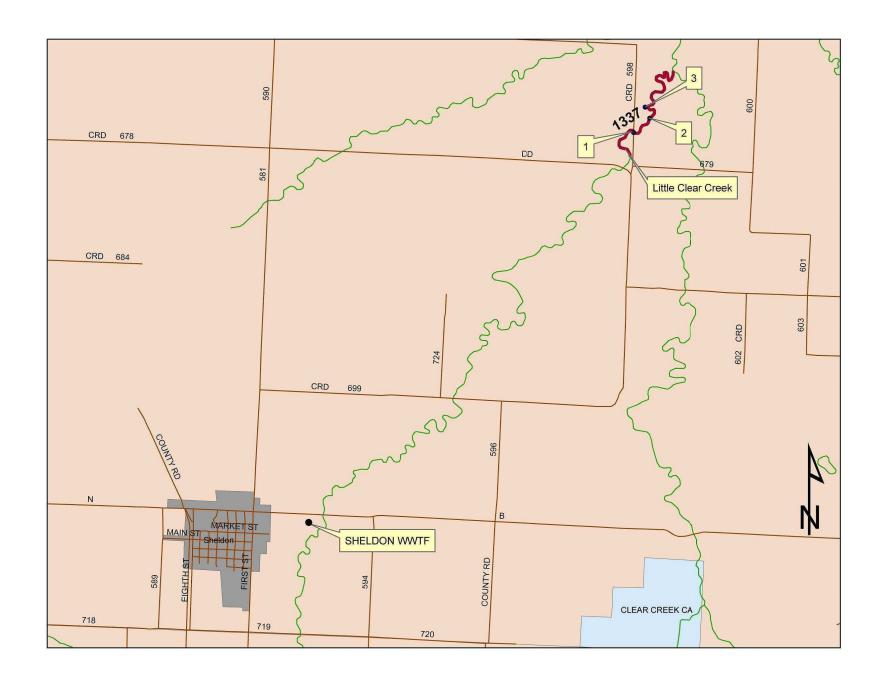
### **Discharger Facility Information**

Discharger Facility Name(s):	Sheldon WWTF
Discharger Permit Number(s):	MO0040177

#### **UAA Surveyor**

Name of Survey	ror: Nolan Pringle	Telephone Number:	(903)307-0046
Organization/En	nployer: SES, Inc.		
Position: Field	I Team Leader		

Signed:	Date:
•	



# Field Data Sheets for Recreational Use Stream Surveys Data Sheet B - Site Characterization (must be completed for each site)

WBID 1337 Site # 1

Date and Time: 5/22/2007 9:40

Current Weather Conditions sunny, clear

Weather Conditions for Past 10 days: Rain showers in the area on 5/15

Drought Conditions? No

Site Location (e.g. road crossing) at road crossing

GPS Mark: 60

Upstream Photo 117 Downstream Photo 116

Uses Observed (Uses actually observed at time of survey) Circle

Swimming Skin Diving SCUBA diving Tubing

Water Skiing Wind Surfing Kayaking Boating

Wading Rafting Hunting Trapping

Fishing None of the Above Other

**Surrounding Conditions** 

City/county parks Playgrounds MDC conservation lands Urban areas

Campgrounds Boating accesses State parks National Forests

Nature trails Stairs/walkway No trespass sign Fence

Steep slopes None of the Above Other

**Indications of Human Use** 

Roads Rope swings Foot paths/prints Dock/platform

Livestock Watering RV/ATV Tracks Camping Sites Fire pit/ring

NPDES Discharge Fishing Tackle Other: None of the Above

<b>WBID</b> # 133	37	Site #	1			
Mark #	60	Dissolve	d Oxygen (p	opm)	11.6	
Upstream Views P	hysical Dime	ensions:	Is there a	ny water	present at this view?	yes
			If so is the	are an oh	ovious current?	VAC
			11 50, 15 1116	ere arrob	Wious current?	yes
Select one of the fo	ollowing cha	nnel featu	res:			
	annel Feature					
Riffle	15					
Run	0					
Pool	85					
Downstroam View'	e Physical D	imonsions	. le thoro ar	water i	present at this view?	
Downstream view	s Pilysical D	viillelisiolis	. IS lifere ai	iy watei j	present at this view?	
			If so, is the	ere an ob	vious current?	
			1	1	т г	
				1		_
<u> </u>				1		$\dashv$
Substrate:						
oubstrate.						
% Cobble	% Gravel		% Sand		% Silt	
15	20	)		)	30	
% Mud/Clay	% Bedroc	k	7			
35	. (	)	<b>_</b>			
Aquatic Vegetation	n: (Note amo	unt of vege	etation or a	lgal grov	vth at the assessment	site)
Motor grad	aca Not mu	sh voqotatio	n alana han	ko Nof	loating algae Algae en	rooko
vvaler gras	ses. Not muc	ii vegetatio	ili along ban	iks. NO II	loating algae. Algae on	TOCKS.
Water Characterist	ics					
Odor	Sewage	Musky	Chemical	None	Other	
	•	,				
Color	Clear	Green	Gray	Milky	Other	
				-		
Bottom Deposit	Sludge	Solids	Fine Sed.	None	Other: leaves	
Surface Deposit	Oil	Scum: in	<b>€</b> Foam	None	Other	

### Data Sheet C: Cross-Sectional Depth Measurements (for estimation of median depth) (Median Depth Shown in Bold)

Site # 1 Mark # 60

	Depth (m)		Depth (m)	_	Depth (m)
Transect 1	0.05	Transect 5	0.40	Transect 9	0.05
Substrate:	0.05	Substrate:	0.60	Substrate:	0.10
gravel/cobble/silt	0.05	mud/gravel/silt	0.80	mud/silt/gravel/cobble	0.10
Water Clarity:	0.10	Water Clarity:	1.00	Water Clarity:	0.15
clear to murky	0.15	murky	1.00	clear to murky	0.15
Channel Feature:	0.15	Channel Feature:	1.00	Channel Feature:	0.20
riffle/pool	0.15	pool	1.00	pool	0.15
Channel Width:	0.10	Channel Width:	0.85	Channel Width:	0.15
7 yards	0.10	8 yards	0.40	3 yards	0.15
0.10	0.05	0.83	0.15	0.15	0.05
Transect 2	0.10	Transect 6	0.25	Transect 10	0.05
Substrate:	0.35	Substrate:	0.35	Substrate:	0.10
mud/silt/gravel	0.45	mud/cobble/gravel/silt	0.40	nud/silt/gravel/cobble	0.10
Water Clarity:	0.50	Water Clarity:	0.50	Water Clarity:	0.15
murky	0.70	murky	0.45	clear to murky	0.15
Channel Feature:	0.75	Channel Feature:	0.45	Channel Feature:	0.15
pool	0.65	pool	0.45	pool	0.10
Channel Width:	0.60	Channel Width:	0.30	Channel Width:	0.15
8 yards	0.40	6 yards	0.25	3 yards	0.15
0.48	0.35	0.38	0.15	0.15	0.15
Transect 3	0.40	Transect 7	0.40	Transect 11	0.05
Substrate:	0.55	Substrate:	0.40	Substrate:	0.10
mud/silt/gravel	0.60	mud/gravel/silt	0.35	nud/silt/cobble/gravel	0.25
Water Clarity:	0.60	Water Clarity:	0.30	Water Clarity:	0.20
murky	0.70	clear to murky	0.30	clear to murky	0.25
Channel Feature:	0.70	Channel Feature:	0.30	Channel Feature:	0.25
pool	0.65	pool	0.25	pool	0.25
Channel Width:	0.65	Channel Width:	0.25	Channel Width:	0.15
9 yards	0.65	4 yards	0.20	3 yards	0.05
0.63	0.35	0.30	0.10	0.18	0.05
Transect 4	0.25	Transect 8	0.05		
Substrate:	0.50	Substrate:	0.05		
mud/silt/gravel	0.60	gravel/cobble	0.15		
Water Clarity:	0.75	Water Clarity:	0.10		
murky	0.50	clear to murky	0.10		
Channel Feature:	0.50	Channel Feature:	0.05		
pool	0.50	riffle	0.05		
Channel Width:	0.50	Channel Width:	0.05		
7 yards	0.45	2 yards	0.10		
0.50	0.25	0.05	0.05		

# Field Data Sheets for Recreational Use Stream Surveys Data Sheet B - Site Characterization (must be completed for each site)

WBID 1337 Site # 2

Date and Time: 5/22/2007 10:45

Current Weather Conditions sunny, clear

Weather Conditions for Past 10 days: Rain showers in the area on 5/15

Drought Conditions? No

Site Location (e.g. road crossing) 500yards downstream from road crossing

GPS Mark: 61

Upstream Photo 118 Downstream Photo 119

Uses Observed (Uses actually observed at time of survey) Circle

Swimming Skin Diving SCUBA diving Tubing

Water Skiing Wind Surfing Kayaking Boating

Wading Rafting Hunting Trapping

Fishing None of the Above Other

**Surrounding Conditions** 

City/county parks Playgrounds MDC conservation lands Urban areas

Campgrounds Boating accesses State parks National Forests

Nature trails Stairs/walkway No trespass sign Fence

Steep slopes None of the Above Other

**Indications of Human Use** 

Roads Rope swings Foot paths/prints Dock/platform

**Camping Sites** 

Fire pit/ring

Livestock Watering RV/ATV Tracks

See Picture 119

NPDES Discharge Fishing Tackle Other:

WBID # 1337 Site # 2 Mark # 61 Dissolved Oxygen (ppm) 11 Upstream Views Physical Dimensions: Is there any water present at this view? yes								
				If so, is the	re an obv	ious current?		yes
Select one		owing cha	nnel feature	es:				
Riffle		0						]
Run		0						
Pool		100						J
Downstrea	am View's	Physical D	imensions:			resent at this vious current?		
				00, 10 1.10		iodo odironi.		
								]
								J
Substrate:								
% Cobble		% Gravel		% Sand		% Silt		]
12		10/ Dadra al		0		42		
% Mud/Cla 42	•	% Bedrock		J				
. –		J		tation or al	gal grow	th at the asse	essment si	te)
Aquatic Vegetation: (Note amount of vegetation or algal growth at the assessment site)  No floating algae. Little vegetation along banks. Algae on bottom.								
Water Cha	aracteristic	s						
Odor		Sewage	Musky	Chemical	None	Other		
Color		Clear	Green	Gray	Milky	Other		
Bottom De		Sludge	Solids	Fine Sed.	None	Other: leave	es, detritus	
Surface De	eposit	Oil	Scum	Foam	None	Other		

## Data Sheet C: Cross-Sectional Depth Measurements (for estimation of median depth) (Median Depth Shown in Bold)

Depth (m)

Depth (m)

Site # 2 Mark # 61

Depth (m)

Bopan (III)		= <b>0 p</b> a ()		Boptii (iii)
0.05	Transect 5	0.10	Transect 9	0.05
0.10	Substrate:	0.25	Substrate:	0.10
0.35	mud/silt	0.25	cobble/mud/silt	0.10
0.40	Water Clarity:	0.30	Water Clarity:	0.20
0.45	murky	0.30	murky	0.30
0.50	Channel Feature:	0.35	Channel Feature:	0.15
0.50	pool	0.30	pool	0.15
0.45	Channel Width:	0.30	Channel Width:	0.10
0.45	6 yards	0.20	5 yards	0.05
0.35	0.28	0.20	0.10	0.05
0.20	Transect 6	0.30	Transect 10	0.05
0.40	Substrate:	0.40	Substrate:	0.05
0.30	mud/silt	0.50	nud/cobble/gravel/silt	0.10
0.30	Water Clarity:	0.60	Water Clarity:	0.10
0.25	murky	0.60	clear to murky	0.10
0.25	Channel Feature:	0.60	Channel Feature:	0.05
0.25	pool	0.60	pool	0.05
0.20	Channel Width:	0.40	Channel Width:	0.05
0.20	8 yards	0.30	2 yards	0.05
0.20	0.45	0.20	0.05	0.05
0.10	Transect 7	0.10	Transect 11	0.20
0.20	Substrate:	0.20	Substrate:	0.25
0.25	mud/silt	0.30	mud/silt	0.25
0.40	Water Clarity:	0.40	Water Clarity:	0.25
0.35	murky	0.30	murky	0.30
0.35	Channel Feature:	0.30	Channel Feature:	0.25
0.35	pool	0.30	pool	0.20
0.30	Channel Width:	0.25	Channel Width:	0.20
0.20	6 yards	0.15	5 yards	0.15
0.20	0.28	0.05	0.23	0.10
0.10	Transect 8	0.20		
0.15	Substrate:	0.25		
0.25	mud/silt	0.30		
0.30	Water Clarity:	0.35		
0.35	murky	0.35		
0.35	Channel Feature:	0.30		
0.30	pool	0.30		
0.30	Channel Width:	0.25		
0.20	5 yards	0.20		
0.15	0.28	0.10		
	0.05 0.10 0.35 0.40 0.45 0.50 0.45 0.45 0.35 0.20 0.40 0.30 0.25 0.25 0.25 0.20 0.10 0.20 0.35 0.35 0.35 0.35 0.35 0.35 0.35 0.3	0.05         Transect 5           0.10         Substrate:           0.35         mud/silt           0.40         Water Clarity:           0.45         murky           0.50         Channel Feature:           0.50         pool           0.45         Channel Width:           0.45         6 yards           0.35         0.28           0.20         Transect 6           0.40         Substrate:           0.30         mud/silt           0.30         Water Clarity:           0.25         murky           0.25         pool           0.20         Channel Feature:           0.20         0.45           0.20         0.45           0.20         0.45           0.20         0.45           0.20         0.45           0.20         0.45           0.20         0.45           0.20         0.45           0.20         Substrate:           mud/silt         0.40           Water Clarity:         0.35           pool         Channel Feature:           0.35         pool           Channel Wi	0.05         Transect 5         0.10           0.10         Substrate:         0.25           0.35         mud/silt         0.25           0.40         Water Clarity:         0.30           0.45         murky         0.30           0.50         Channel Feature:         0.35           0.50         pool         0.30           0.45         Channel Width:         0.30           0.45         6 yards         0.20           0.28         0.20         0.20           0.20         Transect 6         0.30           0.20         Substrate:         0.40           0.30         Water Clarity:         0.60           0.30         Water Clarity:         0.60           0.25         murky         0.60           0.25         murky         0.60           0.25         pool         0.60           0.25         pool         0.60           0.25         pool         0.60           0.25         pool         0.60           0.20         Channel Width:         0.40           0.20         Ryards         0.30           0.20         Substrate:         0.20<	0.05         Transect 5         0.10         Transect 9         Substrate:         0.25         Substrate:         cobble/mud/silt           0.35         mud/silt         0.25         Substrate:         cobble/mud/silt           0.40         Water Clarity:         0.30         Water Clarity:           0.45         murky         0.30         murky           0.50         Channel Feature:         0.35         Channel Feature:           0.50         Channel Width:         0.30         Channel Feature:           0.45         6 yards         0.20         5 yards           0.35         0.28         0.20         5 yards           0.35         0.28         0.20         0.10           0.40         Substrate:         0.40         Substrate:         0.40           0.40         Substrate:         0.40         Water Clarity:         0.60         Water Clarity:           0.25         murky         0.60         Clear to murky         Channel Feature:         0.60         Water Clarity:           0.25         murky         0.60         Channel Feature:         0.60         Channel Feature:           0.20         Channel Width:         0.40         Channel Width:         0.40

# Field Data Sheets for Recreational Use Stream Surveys Data Sheet B - Site Characterization (must be completed for each site)

WBID 1337 Site # 3

Date and Time: 5/22/2007 11:30

Current Weather Conditions sunny, clear

Weather Conditions for Past 10 days: Rain showers in the area on 5/15

Drought Conditions? No

Site Location (e.g. road crossing) 1000 yards downstream of crossing

GPS Mark: 62

Upstream Photo 121 Downstream Photo 120

Uses Observed (Uses actually observed at time of survey) Circle

Swimming Skin Diving SCUBA diving Tubing

Water Skiing Wind Surfing Kayaking Boating

Wading Rafting Hunting Trapping

Fishing None of the Above Other

**Surrounding Conditions** 

City/county parks Playgrounds MDC conservation lands Urban areas

Campgrounds Boating accesses State parks National Forests

Nature trails Stairs/walkway No trespass sign Fence

Steep slopes None of the Above Other

**Indications of Human Use** 

Roads Rope swings Foot paths/prints Dock/platform

Livestock Watering RV/ATV Tracks Camping Sites Fire pit/ring

NPDES Discharge Fishing Tackle Other: None of the Above

WBID # Mark # Upstream	1337 62 Views Phy			Oxygen (p Is there ar	pm)	11.1 present at this	view?	yes
				If so, is the	ere an obv	vious current?		yes
Select one		owing cha	nnel feature	es:				
Riffle		0						
Run Pool		0 100						
Downstream View's Physical Dimensions: Is there any water present at this view?  If so, is there an obvious current?								
Substrate:		% Gravel		% Sand		% Silt		1
5		0		0		45		1
% Mud/Clay	y	% Bedrock		J				
	egetation:	•	•	tation or al	gal grow	th at the asse	essment si	te)
Aquatic Vegetation: (Note amount of vegetation or algal growth at the assessment site)  Some water grasses. No floating algae. Little vegetation along banks.								
Water Cha	racteristic	S						
Odor		Sewage	Musky	Chemical	None	Other		
Color		Clear	Green	Gray	Milky	Other		
Bottom Dep	oosit	Sludge	Solids	Fine Sed.	None	Other		
Surface De	posit	Oil	Scum	Foam	None	Other		

## Data Sheet C: Cross-Sectional Depth Measurements (for estimation of median depth) (Median Depth Shown in Bold)

Site # 3 Mark # 62

-	Depth (m)		Depth (m)
Transect 1	0.05	Transect 5	0.10
Substrate:	0.05	Substrate:	0.25
mud/silt/cobble	0.05	mud/silt	0.25
Water Clarity:	0.10	Water Clarity:	0.30
clear to murky	0.10	murky	0.35
Channel Feature:	0.10	Channel Feature:	0.40
pool	0.05	pool	0.30
Channel Width:	0.15	Channel Width:	0.30
4 yards	0.05	7 yards	0.25
0.05	0.05	0.28	0.15
Transect 2	0.05	Transect 6	0.10
Substrate:	0.05	Substrate:	0.20
mud/silt	0.05	mud/silt	0.20
Water Clarity:	0.10	Water Clarity:	0.25
clear to murky	0.10	murky	0.30
Channel Feature:	0.10	Channel Feature:	0.30
pool	0.05	pool	0.20
Channel Width:	0.10	Channel Width:	0.20
2 yards	0.05	5 yards	0.15
0.05	0.05	0.20	0.15
Transect 3	0.05	Transect 7	0.15
Substrate:	0.20	Substrate:	0.20
mud/silt	0.25	mud/silt	0.25
Water Clarity:	0.25	Water Clarity:	0.25
clear to murky	0.30	murky	0.25
Channel Feature:	0.25	Channel Feature:	0.20
pool	0.25	pool	0.20
Channel Width:	0.25	Channel Width:	0.15
4 yards	0.15	4 yards	0.05
0.25	0.15	0.20	0.05
Transect 4	0.05	Transect 8	0.05
Substrate:	0.10	Substrate:	0.10
mud/silt	0.25	mud/silt	0.15
Water Clarity:	0.25	Water Clarity:	0.15
clear to murky	0.30	murky	0.20
Channel Feature:	0.20	Channel Feature:	0.15
pool	0.20	pool	0.10
Channel Width:	0.15	Channel Width:	0.10
3 yards	0.15	3 yards	0.10
0.18	0.10	0.10	0.10

_	Depth (m)
Transect 9	0.10
Substrate:	0.10
mud/silt	0.10
Water Clarity:	0.15
murky	0.20
Channel Feature:	0.20
pool	0.15
Channel Width:	0.15
3 yards	0.10
0.13	0.10
Transect 10	0.10
Substrate:	0.10
mud/silt	0.20
Water Clarity:	0.20
murky	0.15
Channel Feature:	0.20
pool	0.15
Channel Width:	0.15
3 yards	0.05
0.15	0.05
Transect 11	0.05
Substrate:	0.05
mud/silt	0.10
Water Clarity:	0.10
murky	0.15
Channel Feature:	0.20
pool	0.20
Channel Width:	0.15
2 yards	0.10
0.10	0.10

### **WBID# 1337**



Site# 1 Photo ID# 117, Upstream



Site# 2 Photo ID# 118, Upstream



Site# 1 Photo ID# 116, Downstream



Site# 2 Photo ID# 119, Downstream / livestock watering

### **WBID# 1337**



Site# 3 Photo ID# 121, Upstream



Site# 3 Photo ID# 120, Downstream